



Roto Z Fluid

Atlas Copco Airpower NV

Chemwatch: 5249-82

Version No: 3.1.1.1

Safety Data Sheet (Conforms to Regulation (EU) No 2015/830)

Issue Date: 21/04/2017

Print Date: 26/09/2017

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SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product Identifier

Product name	Roto Z Fluid
Synonyms	Roto Z.
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Compressor oil
Uses advised against	Not Applicable

1.3. Details of the supplier of the safety data sheet

Registered company name	Atlas Copco Airpower NV
Address	Boomsesteenweg 957 Wilrijk B2610 Belgium
Telephone	+32 3 870 2111
Fax	+32 3 870 2903
Website	www.atlascopco.com
Email	info.lubricants.cts@atlascopco.com

1.4. Emergency telephone number

Association / Organisation	Chemwatch
Emergency telephone numbers	+800 2436 2255
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP]	Not Available
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2.2. Label elements

Hazard pictogram(s)	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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Hazard statement(s)

Not Applicable

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**3.1.Substances**

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP]
1.Not Available 2.Not Available 3.Not Available 4.Not Available	0-90	interchangeable low viscosity base oil contains one or more of the following CAS numbers:	Not Applicable
1.64742-53-6. 2.Not Available 3.649-467-00-2 4.01-2119480375-34-XXXX	NotSpec.	<u>naphthenic distillate, light, hydrotreated (severe)</u>	Specific target organ toxicity - single exposure Category 3 (narcotic effects); H336 ^[1]
1.64742-54-7. 2.Not Available 3.649-467-00-8 4.01-2119484627-25-XXXX	NotSpec.	<u>paraffinic distillate, heavy, hydrotreated (severe)</u>	Specific target organ toxicity - single exposure Category 3 (narcotic effects); H336 ^[1]
1.64742-55-8. 2.Not Available 3.649-468-00-3 4.01-2119487077-29-XXXX	NotSpec.	<u>paraffinic distillate, light, hydrotreated (severe)</u>	Specific target organ toxicity - single exposure Category 3 (narcotic effects); H336 ^[1]
1.64742-56-9. 2.Not Available 3.649-469-00-9 4.01-2119480132-48-XXXX	NotSpec.	<u>paraffinic distillate, light, solvent-dewaxed (severe)</u>	Not Applicable
1.64742-65-0. 2.Not Available 3.649-474-00-6 4.01-2119471299-27-XXXX	NotSpec.	<u>paraffinic distillate, heavy, solvent-dewaxed (severe)</u>	Specific target organ toxicity - single exposure Category 3 (narcotic effects); H336 ^[1]
1.68037-01-4 2.500-183-1 3.Not Available 4.01-2119486452-34-XXXX	NotSpec.	<u>1-decene homopolymer, hydrogenated</u>	Chronic Aquatic Hazard Category 4; H413 ^[1]
1.72623-86-0. 2.276-737-9 3.649-482-00-X 4.01-2119474878-16-XXXX	NotSpec.	<u>lubricating oils, petroleum C15-30 hydrotreated neutral</u>	Not Applicable
1.72623-87-1. 2.276-738-4 3.649-483-00-5 4.01-2119474889-13-XXXX	NotSpec.	<u>lubricating oils, petroleum C20-50, hydrotreated neutral</u>	Not Applicable
1.8042-47-5 2.232-455-8 3.Not Available	NotSpec.	<u>white mineral oil (petroleum)</u>	Not Applicable

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4.01-2119487078-27-XXXX			
1.848301-69-9 2.482-220-0 3.Not Available 4.Not Available	NotSpec.	<u>distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear</u>	Specific target organ toxicity - single exposure Category 3 (narcotic effects), Aspiration Hazard Category 1; H336, H304 ^[1]
Legend: 1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L			

SECTION 4 FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none"> ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. ▶ Avoid giving milk or oils. ▶ Avoid giving alcohol.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

Treat symptomatically.

- ▶ Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- ▶ In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- ▶ High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

SECTION 5 FIREFIGHTING MEASURES

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Do not use a water jet to fight fire.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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5.3. Advice for firefighters

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Fire Fighting	<ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course. ▶ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Combustible. ▶ Slight fire hazard when exposed to heat or flame. ▶ Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include:</p> <ul style="list-style-type: none"> carbon dioxide (CO₂) other pyrolysis products typical of burning organic material. <p>May emit poisonous fumes.</p>

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	<p>Slippery when spilt.</p> <ul style="list-style-type: none"> ▶ Remove all ignition sources. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment.
Major Spills	<p>Slippery when spilt. Moderate hazard.</p> <ul style="list-style-type: none"> ▶ Clear area of personnel and move upwind. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear breathing apparatus plus protective gloves.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling	<p>The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.</p> <ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Electrostatic discharge may be generated during pumping - this may result in fire. ▶ Ensure electrical continuity by bonding and grounding (earthing) all equipment. ▶ Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). ▶ Avoid splash filling. ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Prevent concentration in hollows and sumps.
Fire and explosion protection	See section 5
Other information	<ul style="list-style-type: none"> ▶ Store in original containers. ▶ Keep containers securely sealed. ▶ No smoking, naked lights or ignition sources. ▶ Store in a cool, dry, well-ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

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Suitable container	<ul style="list-style-type: none"> ▶ Metal can or drum ▶ Packaging as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<p>CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.</p> <ul style="list-style-type: none"> ▶ Avoid reaction with oxidising agents

7.3. Specific end use(s)

See section 1.2

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

DERIVED NO EFFECT LEVEL (DNEL)

Not Available

PREDICTED NO EFFECT LEVEL (PNEC)

Not Available

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	naphthenic distillate, light, hydrotreated (severe)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	paraffinic distillate, heavy, hydrotreated (severe)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	paraffinic distillate, light, hydrotreated (severe)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	paraffinic distillate, light, solvent-dewaxed (severe)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	paraffinic distillate, heavy, solvent-dewaxed (severe)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	lubricating oils, petroleum C15-30 hydrotreated neutral	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	lubricating oils, petroleum C20-50, hydrotreated neutral	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available
Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)	white mineral oil (petroleum)	Oil mist, incl. oil fumes	1 mg/m3	3 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
paraffinic distillate, heavy, solvent-dewaxed (severe)	Pump oil; (petroleum distillates, solvent de-waxed heavy paraffinic	140 mg/m3	1,500 mg/m3	8,900 mg/m3
1-decene homopolymer, hydrogenated	Decene, 1-, homopolymer, hydrogenated	30 mg/m3	330 mg/m3	2,000 mg/m3

Ingredient	Original IDLH	Revised IDLH
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interchangeable low viscosity base oil contains one or more of the following CAS numbers:	Not Available	Not Available
naphthenic distillate, light, hydrotreated (severe)	2,500 mg/m3	Not Available
paraffinic distillate, heavy, hydrotreated (severe)	2,500 mg/m3	Not Available
paraffinic distillate, light, hydrotreated (severe)	2,500 mg/m3	Not Available
paraffinic distillate, light, solvent-dewaxed (severe)	2,500 mg/m3	Not Available
paraffinic distillate, heavy, solvent-dewaxed (severe)	2,500 mg/m3	Not Available
1-decene homopolymer, hydrogenated	Not Available	Not Available
lubricating oils, petroleum C15-30 hydrotreated neutral	2,500 mg/m3	Not Available
lubricating oils, petroleum C20-50, hydrotreated neutral	2,500 mg/m3	Not Available
white mineral oil (petroleum)	2,500 mg/m3	Not Available
distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear	Not Available	Not Available

MATERIAL DATA


NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5). This note applies only to certain complex oil-derived substances in Annex IV.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

NOTE L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

8.2. Exposure controls

8.2.1. Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
8.2.2. Personal protection	
Eye and face protection	<ul style="list-style-type: none"> ▶ Safety glasses with side shields ▶ Chemical goggles. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.
Skin protection	See Hand protection below
Hands/feet protection	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <ul style="list-style-type: none"> ▶ Neoprene rubber gloves ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber

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Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▸ Overalls. ▸ P.V.C. apron. ▸ Barrier cream.
Thermal hazards	Not Available

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	Amber liquid, slight hydrocarbon odour		
Physical state	Liquid	Relative density (Water = 1)	0.860 @ 15 C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	320
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	68 @ 20 C
Initial boiling point and boiling range (°C)	>280	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	247	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	10	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1	Volatile Component (%vol)	0 (VOC)
Vapour pressure (kPa)	<0.0005 @ 20 C	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	>1	VOC g/L	Not Available

9.2. Other information

Not Available

SECTION 10 STABILITY AND REACTIVITY

10.1.Reactivity	See section 7.2
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10.2. Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhaled	<p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis.</p> <p>Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination</p>
Ingestion	Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	<p>The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Chronic	<p>Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anaemia and degenerative changes in the liver and kidney. Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paraesthesias), psychological and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localised dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms.</p> <p>Repeated application of mildly hydrotreated oils (principally paraffinic), to mouse skin, induced skin tumours; no tumours were induced with severely hydrotreated oils.</p>

Roto Z Fluid	TOXICITY	IRRITATION
	Dermal (Rabbit) LD50: >5000 mg/kg ^[2]	Not Available
	Oral (Rat) LD50: >5000 mg/kg ^[2]	
naphthenic distillate, light, hydrotreated (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[2]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
paraffinic distillate, heavy, hydrotreated (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
paraffinic distillate, light, hydrotreated (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: 0.0039 mg/L/4H ^[2]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	

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paraffinic distillate, light, solvent-dewaxed (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
paraffinic distillate, heavy, solvent-dewaxed (severe)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
1-decene homopolymer, hydrogenated	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye*(rabbit):0-4/110.0-nonirritant
	Inhalation (rat) LC50: >0.0025 mg/L/4h ^[2]	Skin**(rabbit)-0.5/8.0-nonirritant
	Oral (rat) LD50: >2000 mg/kg ^[1]	
lubricating oils, petroleum C15-30 hydrotreated neutral	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
lubricating oils, petroleum C20-50, hydrotreated neutral	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
white mineral oil (petroleum)	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Oral (rat) LD50: >5000 mg/kg ^[1]	
distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear	TOXICITY	IRRITATION
	Not Available	Not Available
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED (SEVERE)	* Q8 MSDS
1-DECENE HOMOPOLYMER, HYDROGENATED	<p>for poly-alpha-olefins (PAOs):</p> <p>PAOs are highly branched isoparaffinic chemicals produced by oligomerisation of 1-octene, 1-decene, and/or 1-dodecene. The crude polyalphaolefin mixture is then distilled into appropriate product fractions to meet specific viscosity specifications and hydrogenated.</p> <p>Read across data exist for health effects endpoints from the following similar <i>hydrogenated</i> long chain branched alkanes derived from a C8, C10, and/or C12 alpha olefins:</p> <ul style="list-style-type: none"> ▸ Decene homopolymer ▸ Decene/dodecene copolymer ▸ Octene/decene/dodecene copolymer ▸ Dodecene trimer <p>The data for these structural analogs demonstrated no evidence of health effects. In addition, there is evidence in the literature that alkanes with 30 or more carbon atoms are unlikely to be absorbed when administered orally.</p> <p>(estimated) * Evidence of conjunctival changes ** No evidence of tissue damage [Inland Vacuum Industries] ^ US EPA HPV Challenge program October 2002</p>
WHITE MINERAL OIL (PETROLEUM)	Oral (rat) TCLo: 92000 mg/kg/92D-Cont. Generally the toxicity and irritation is of low order. White oils and highly/solvent refined oils have not shown the long term risk of skin cancer that follows persistent skin contamination with some other mineral oils, due in all probability to refining that produces low content of both polyaromatics (PAH) and benz-alpha-pyrenes (BaP)
NAPHTHENIC DISTILLATE, LIGHT, HYDROTREATED	<p>The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives;</p> <p>The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has</p>

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<p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED</p> <p>(SEVERE) & LUBRICATING OILS, PETROLEUM C15-30 HYDROTREATED</p> <p>NEUTRAL & LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED</p> <p>NEUTRAL & WHITE MINERAL OIL (PETROLEUM)</p>	<p>undergone, since:</p> <ul style="list-style-type: none"> ▸ The adverse effects of these materials are associated with undesirable components, and ▸ The levels of the undesirable components are inversely related to the degree of processing; ▸ Distillate base oils receiving the same degree or extent of processing will have similar toxicities; ▸ The potential toxicity of <i>residual base oils</i> is independent of the degree of processing the oil receives. ▸ The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing. <p>Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential carcinogenic and mutagenic activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components.</p>
<p>NAPHTHENIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED</p> <p>(SEVERE) & LUBRICATING OILS, PETROLEUM C15-30 HYDROTREATED</p> <p>NEUTRAL & LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED</p> <p>NEUTRAL & WHITE MINERAL OIL (PETROLEUM)</p>	<p>Highly and Severely Refined Distillate Base Oils</p> <p>Acute toxicity: Multiple studies of the acute toxicity of highly & severely refined base oils have been reported. Irrespective of the crude source or the method or extent of processing, the oral LD50s have been observed to be >5 g/kg (bw) and the dermal LD50s have ranged from >2 to >5g/kg (bw). The LC50 for inhalation toxicity ranged from 2.18 mg/l to > 4 mg/l.</p> <p>When tested for skin and eye irritation, the materials have been reported as “non-irritating” to “moderately irritating”</p> <p>Testing in guinea pigs for sensitization has been negative</p> <p>Repeat dose toxicity: .</p>
<p>NAPHTHENIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED</p> <p>(SEVERE) & WHITE MINERAL OIL (PETROLEUM)</p>	<p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>
<p>PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED</p> <p>(SEVERE) & PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED</p>	<p>No significant acute toxicological data identified in literature search.</p>

Roto Z Fluid

(SEVERE) & PARAFFINIC
DISTILLATE, HEAVY,
SOLVENT-DEWAXED
(SEVERE) & DISTILLATES
(FISCHER-TROPSCH),
HEAVY, C18-50,
BRANCHED, CYCLIC AND
LINEAR

Acute Toxicity	✗	Carcinogenicity	⊖
Skin Irritation/Corrosion	⊖	Reproductivity	⊖
Serious Eye Damage/Irritation	⊖	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖
Mutagenicity	⊖	Aspiration Hazard	⊖

Legend: ✗ – Data available but does not fill the criteria for classification

✓ – Data available to make classification

⊖ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

12.1. Toxicity

Roto Z Fluid	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
naphthenic distillate, light, hydrotreated (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	EC50	96	Algae or other aquatic plants	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
paraffinic distillate, heavy, hydrotreated (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	EC50	96	Algae or other aquatic plants	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
paraffinic distillate, light, hydrotreated (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
paraffinic distillate, light, solvent-dewaxed (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
paraffinic distillate, heavy, solvent-dewaxed (severe)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	EC50	96	Algae or other aquatic plants	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
1-decene homopolymer, hydrogenated	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
lubricating oils, petroleum C15-30 hydrotreated neutral	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1

Roto Z Fluid

lubricating oils, petroleum C20-50, hydrotreated neutral	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	EC50	48	Crustacea	>1000mg/L	1
	NOEC	504	Crustacea	>1mg/L	1
white mineral oil (petroleum)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
1-decene homopolymer, hydrogenated	LOW	LOW

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
1-decene homopolymer, hydrogenated	HIGH (LogKOW = 5.116)

12.4. Mobility in soil

Ingredient	Mobility
1-decene homopolymer, hydrogenated	LOW (KOC = 1724)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT Criteria fulfilled?	Not Available	Not Available	Not Available

12.6. Other adverse effects

No data available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Authority for disposal. ▶ Bury or incinerate residue at an approved site. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
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Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Class	Not Applicable
	Subrisk	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	Not Applicable
	Hazard Label	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	IMDG Class	Not Applicable
	IMDG Subrisk	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable
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Roto Z Fluid

14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Not Applicable	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture****NAPHTHENIC DISTILLATE, LIGHT, HYDROTREATED (SEVERE)(64742-53-6.) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2)
Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

PARAFFINIC DISTILLATE, HEAVY, HYDROTREATED (SEVERE)(64742-54-7.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2)
Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

PARAFFINIC DISTILLATE, LIGHT, HYDROTREATED (SEVERE)(64742-55-8.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2)
Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED (SEVERE)(64742-56-9.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2)
Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE)(64742-65-0.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Roto Z Fluid

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2) Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

1-DECENE HOMOPOLYMER, HYDROGENATED(68037-01-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)

LUBRICATING OILS, PETROLEUM C15-30 HYDROTREATED NEUTRAL(72623-86-0.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2) Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED NEUTRAL(72623-87-1.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 2) Carcinogens: category 1B (Table 3.1)/category 2 (Table 3.2)

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

WHITE MINERAL OIL (PETROLEUM)(8042-47-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

European Customs Inventory of Chemical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Sweden Occupational Exposure Limit Values and Measures against Air Contaminants (English)

DISTILLATES (FISCHER-TROPSCH), HEAVY, C18-50, BRANCHED, CYCLIC AND LINEAR(848301-69-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments

15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

National Inventory	Status
Australia - AICS	Y
Canada - DSL	N (distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)
Canada - NDSL	N (paraffinic distillate, heavy, hydrotreated (severe); 1-decene homopolymer, hydrogenated; paraffinic distillate, light, solvent-dewaxed (severe); paraffinic distillate, heavy, solvent-dewaxed (severe); naphthenic distillate, light, hydrotreated (severe); lubricating oils, petroleum C15-30 hydrotreated neutral; lubricating oils, petroleum C20-50, hydrotreated neutral; white mineral oil (petroleum); paraffinic distillate, light, hydrotreated (severe); distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)
China - IECSC	N (distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)
Europe - EINEC / ELINCS / NLP	N (distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)
Japan - ENCS	N (paraffinic distillate, light, solvent-dewaxed (severe); paraffinic distillate, heavy, solvent-dewaxed (severe); lubricating oils, petroleum C15-30 hydrotreated neutral; lubricating oils, petroleum C20-50, hydrotreated neutral; white mineral oil (petroleum); distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	N (distillates (Fischer-Tropsch), heavy, C18-50, branched, cyclic and linear)

Roto Z Fluid

Legend:*Y = All ingredients are on the inventory**N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)***SECTION 16 OTHER INFORMATION****Full text Risk and Hazard codes**

H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H413	May cause long lasting harmful effects to aquatic life.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection

EN 340 Protective clothing

EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals

EN 133 Respiratory protective devices

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average

PC—STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit.

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

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